Isla H. Myers-Smith

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I investigate global change drivers and impacts with a focus on tundra ecosystems. I work at sites in the Yukon Territory and conduct data syntheses at tundra-biome and global scales. I communicate to broad audiences and work collaboratively with local communities to better understand environmental change in the Arctic and beyond.

Education and Employment

2016 - cont.	University of Edinburgh Chancellor's Fellow (Senior Lecturer - equivalent of associate professor, further promotion delayed by Covid), School of GeoSciences
2013 - 2016	University of Edinburgh Chancellor's Fellow (Lecturer - equivalent of assistant professor), School of GeoSciences
2012	University of British Columbia Post doc., Department of Geography (GR Henry) Estimating tundra shrub expansion: Growth of willows across climate and latitudinal gradients
2011 - 2012	Université de Sherbrooke Post doc., Département de biologie (M. Vellend) Shrub expansion in tundra ecosystems: A synthesis of annual growth ring data from sites around the Arctic
2006 - 2011	University of Alberta Ph.D. Ecology (DS Hik) Shrub encroachment in Arctic and alpine tundra: Patterns of expansion and ecosystem impacts
2002 - 2005	University of Alaska Fairbanks M.Sc. Biology (AD McGuire, JW Harden, FS Chapin) Carbon exchange and permafrost collapse: Implications for a changing climate
2000 - 2002	University of British Columbia B.Sc. Agroecology
1998 - 2000	Trent University Biology

Funding under consideration

2022 - 2025	IH Myers-Smith, M Humphries, Aklavik HTC, T Lantz, M Suitor, etc.. Shifting Seasons: Impacts of changing vegetation and seasonality on wildlife and livelihoods in the Western Arctic. Canada-Inuit Nunangat-United Kingdom Arctic Research Programme (*CINUK*, through to second stage of assessment)	$1,755,145 CAD (£680K GBP to Myers-Smith)
2022 - 2026	IH Myers-Smith. TundraTime: Plant phenology change as a driver of Arctic greening trends. NERC Standard Grant (score of 5.75/6 during peer review)	£771,763 GBP (Myers-Smith is sole PI)
2022 - 2027	M Rietkerk, A Doelman, IH Myers-Smith, E Meron. Pathways of resilience and evasion of tipping in ecosystems. European Research Council Synergy Grant	€9,829,821 EUR (€1,951,723 EUR to Myers-Smith)

Funding successes - Total: > £1 million GBP (~£750K as sole PI, ~£7.7M as a co-investigator)

2021 - 2024	M Suitor, *et al.* IH Myers-Smith. Ecological Change and Livelihoods in the Porcupine Caribou Summer Range. Canadian Mountain Network	$480,000 CAD (58K CAD to Myers-Smith)
2020 - 2024	B Forbes, *et al.* IH Myers-Smith. CHARTER: Drivers and Feedbacks of Changes in Arctic Terrestrial Biodiversity. Horizon 2020	5,899,931 EUR (~300K EUR to Myers-Smith)

2021 - 2023	JT Kerby, IH Myers-Smith, Martin Edström. Accessing 'Our Island' (Qikiqtaruk) in a rapidly changing Arctic using immersive virtual reality for community engagement. National Geographic Society	24,655 USD
2020 - 2021	IH Myers-Smith, E Laliberté, A Bjorkman, et al. Capturing tundra responses to warming across microclimates. United Kingdom & Canada Arctic Partnership: 2020 Bursaries Programme	20,000 GBP
2019 - 2020	IH Myers-Smith, GHR Henry, TC Lantz, J Kerby, *et al.* Disentangle the drivers of Arctic greening across spatial scales. United Kingdom & Canada Arctic Partnership: 2019 Bursaries Programme	19,350 GBP
	IH Myers-Smith, JT Kerby *et al.* Disentangle the drivers of Arctic greening. National Geographic Society	25,600 USD
2018 - 2022	E Laliberté, *et al.* IH Myers-Smith (International Partner). The Canadian Airborne Biodiversity Observatory. NSERC Discovery Frontiers Program.	4,000,000 CAD (~50K CAD to Myers-Smith and PhD position)
2018 - 2019	IH Myers-Smith. Testing the links between permafrost disturbances and vegetation change. Walters Kundert Fellowship, Royal Geographical Society	10,000 GBP
	IH Myers-Smith, GHR Henry, TC Lantz, J Kerby. Capturing the landscape-context of long-term records of tundra vegetation change. United Kingdom & Canada Arctic Partnership: 2018 Bursaries Programme	19,350 GBP
2017 - 2018	IH Myers-Smith, TC Lantz, R Fraser, A Cunliffe, J Kerby. Quantifying the drivers of rapid tundra vegetation change: Knowledge transfer between UEdinburgh and UVictoria for enhanced drone-based ecological monitoring in the western Canadian Arctic. United Kingdom & Canada Arctic Partnership: 2017 Bursaries Programme	19,350 GBP
2016	IH Myers-Smith, *et al.* Experimental assessment of growth, traits and phenological plasticity of Arctic tundra shrubs. Moray Endowment Fund	1360 GBP
2015 - 2018	IH Myers-Smith. NERC ShrubTundra Project (NE/M016323/1): Climate as a driver of shrub expansion and tundra greening. New Investigator Standard Grant, UK Natural Environment Research Council (sole PI)	FEC 667,445 GBP
2014	IH Myers-Smith. Carnegie Trust Travel Award	2485 GBP
	IH Myers-Smith. Percy Sladen Memorial Fund	1000 GBP
	IH Myers-Smith, *et al.* sTUNDRA II: Scaling shrub expansion from site to biome. Synthesis Centre for Biodiversity Science (sDiv)	10,395 EUR
2013	IH Myers-Smith, *et al.* Tundra ecosystem change: Scaling shrub expansion from site to biome. Synthesis Centre for Biodiversity Science (sDiv)	30,823 EUR
2010	Forbes B, IH Myers-Smith, M Wilmking, M Hallinger, M Macias-Fauria. Does summer warming promote circumpolar tundra shrub expansion? A synthesis of shrub annual growth ring chronologies from sites around the Arctic. International Arctic Science Committee	7500 EUR
2007 - 2011	Myers-Smith IH. Shrub line advance in alpine tundra of the Kluane region: mechanisms of expansion and ecosystem impacts. Canon Parks Science Scholars Program	80,000 USD

	Myers-Smith IH. Shrub expansion in alpine tundra of the Kluane Region. Alberta Ingenuity Research Stipend, Alberta Ingenuity Fund	1500 CAD p.a.
	Myers-Smith IH. Shrub expansion in alpine tundra of the Kluane Region. Northern Scientific Training Program Grant	3500 CAD p.a.
	Myers-Smith IH. Shrub expansion in alpine tundra of the Kluane Region. Circumpolar/Boreal Alberta Research Grant	1500 CAD p.a.
	Myers-Smith IH. 2007. Shrub expansion in alpine tundra of the Kluane Region. Yukon College Northern Research Institute Grant	2000 CAD
2002 - 2005	E Betts, H Clilverd, E Kane, N Lisuzzo, IH Myers-Smith, J O'Donnell, J Vogel. Watershed nitrogen retention across biomes: a synthesis of Long-term Ecological Research. NSF LTER Program, Bonanza Creek Experimental Forest, Fairbanks, Alaska. Long-term Ecological Research Program Workshop Funding	5000 USD

Research Findings

My recent findings and key papers are cited in global impact assessments including the IPCC (WG1 and WG2) and IPBES IPCC-IPBES and IPCC Polar Regions reports. My research findings to date indicate that:

- Shrub cover is increasing in the tundra biome [1,2] and growth is climate sensitive [2–4] contributing to climate feedbacks.
- Tundra vegetation is increasing and bare ground is decreasing[4,5], and where plants were already present, they are now growing taller[4,6] altering ecosystem processes.
- At focal Arctic field research sites, plants are greening up to two weeks earlier in spring[4,7], but the period of plant growth is not always becoming longer over time[4] or with experimental warming[8] with implications for carbon cycling[9] and Arctic food webs[7].
- Tundra greenness trends observed by satellites are not just a result of increases in plant productivity, but represent complex land-surface dynamics at high latitudes[10].
- Globally, a broad spectrum of population and biodiversity change is occurring across the planet[11–15] driven by a wide range of drivers[16].
- It is the traits of species[6,17,18] that are influencing the functioning of ecosystems as global change intensifies.
- Ecological monitoring of biodiversity responses to global change requires collaboration among researchers, environmental management agencies and Indigenous people[4].

1. Myers-Smith, I.H. et al. *Environ. Res. Lett.* **6**, 045509 (2011).
2. García Criado, M., Myers-Smith, I.H., Bjorkman, A.D., Lehmann, C.E.R. & Stevens, N. *Glob. Ecol. Biogeogr.* **29**, 925–943 (2020).
3. Myers-Smith, I.H. et al. *Nat. Clim. Change* **5**, 887–891 (2015).
4. Myers-Smith, I.H. et al. *Ecol. Monogr.* **89**, e01351 (2019).
5. Elmendorf, S.C. et al. *Nat. Clim. Change* **2**, 453–457 (2012).
6. Bjorkman, A.D. et al. *Nature* **562**, 57–62 (2018).
7. Assmann, J.J. et al. *Glob. Change Biol.* **25**, 2258–2274 (2019).
8. Collins, C.G. et al. *Nat. Commun.* **12**, 3442 (2021).
9. Mekonnen, Z. & et al. *Environ. Res. Lett.* (2021).
10. Myers-Smith, I.H. et al. *Nat. Clim. Change* **10**, 106–117 (2020).
11. Vellend, M. et al. *Annu. Rev. Plant Biol.* **68**, 563–586 (2017).
12. Blowes, S.A. et al. *Science* **366**, 339–345 (2019).
13. Daskalova, G.N. et al. *Science* **368**, 1341–1347 (2020).
14. Daskalova, G.N., Myers-Smith, I.H. & Godlee, J.L. *Nat. Commun.* **11**, 4394 (2020).
15. Vellend, M. et al. *Proc. Natl. Acad. Sci.* **110**, 19456–19459 (2013).
16. Daskalova, G.N., Bowler, D., Myers-Smith, I. & Dornelas, M. (2021).doi:10.32942/osf.io/db4s7
17. Thomas, H.J.D. et al. *Nat. Commun.* **11**, 1351 (2020).
18. Myers-Smith, I.H., Thomas, H.J.D. & Bjorkman, A.D. *New Phytol.* **221**, 1742–1748 (2019).

Scientific publications (https://teamshrub.com/publications/)

* indicates senior authorship and (PhD/Postdoc/MSc/Undergrad) indicates an ERC in my research group

November 2021: total: 78, Google scholar citations = 9218, h-index = 44, citations in 2021 = 2352, ORCID citations = 6183, h-index = 38**,** Google Scholar, ORCID ID: https://orcid.org/0000-0002-8417-6112

2021 Staude IR, et al. **IH Myers-Smith**… **Consistent replacement of small- by large-ranged plant species across habitats**. EcoEvoRxiv. 25 Jan. 2021. doi: https://ecoevorxiv.org/ujky2/ Accepted at *Ecology Letters* (ELE-00326-2021)

Heijmans M *et al.* **IH Myers-Smith**… Tundra vegetation change trajectories across permafrost environments and consequences for permafrost thaw. Accepted at *Nature Reviews Earth & Environment* (NATREVEARTHENVIRON-20-249V1A)

Stanski K (MSc), **IH Myers-Smith***, CG Lucas. 2021. Flower detection using object analysis: New ways to quantify plant phenology in a warming tundra biome. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing 14: 9287-9296. doi: doi.org/10.1109/JSTARS.2021.3110365

Collins CG *et al.* **IH Myers-Smith**… 2021. Experimental warming differentially affects vegetative and reproductive phenology of tundra plants. Nature Communications 12:1-12 doi: https://doi.org/10.1038/s41467-021-23841-2

Cunliffe AM *et al.* **IH Myers-Smith**… 2021. Global application of an unoccupied aerial vehicle photogrammetry protocol for predicting aboveground biomass in non-forest ecosystems. Remote Sensing for Biodiversity & Conservation doi: https://doi.org/10.1002/rse2.228

Prevéy J, *et al.* **IH Myers-Smith**... 2021. The tundra phenology database: More than two decades of tundra phenology responses to climate change. Arctic Science doi: https://doi.org/10.1139/AS-2020-0041

Mekonnen ZA *et al.* **IH Myers-Smith**… 2021. Arctic tundra shrubification: a review of mechanisms and impacts on ecosystem carbon balance. In review at Environmental Research Letters 16(5), p.053001. doi: https://doi-org/10.1088/1748-9326/abf28b

Daskalova GN (PhD), AB Phillimore and **IH Myers-Smith***. 2021. Accounting for year effects and sampling error in temporal analyses of invertebrate population and biodiversity change: a comment on Seibold *et al.* 2019. Insect Conservation and Diversity 14:149-154. https://doi.org/10.1111/icad.12468

Barrio IC *et al.* **IH Myers-Smith**... 2021. Developing common protocols to measure tundra herbivory across spatial scales. Arctic Science. doi: https://doi.org/10.1139/AS-2020-0020

2020 **Myers-Smith IH**, JT Kerby, *et al.* 2020. Complexity revealed in the greening of the Arctic. Nature Climate Change 10:106-117. doi: https://doi.org/10.1038/s41558-019-0688-1

Assmann JJ (PhD), **IH Myers-Smith*** *et al.* 2020. Drone data reveal fine-scale variation of tundra greenness and phenology not captured by satellite and ground-based monitoring. Environmental Research Letters 15:125002. doi: https://doi.org/10.1088/1748-9326/abbf7d

Daskalova GN (PhD), **IH Myers-Smith***, AD Bjorkman, SA Blowes, SR Supp, A Magurran, M Dornelas. 2020. Landscape-scale forest loss as a catalyst of population and biodiversity change. Science 368:1341-1347. doi: https://doi.org/10.1126/science.aba1289

Daskalova GN (PhD), **IH Myers-Smith***, JL Godlee. 2020. Rare and common vertebrates span a wide spectrum of population trends. Nature Communications 11**:**4394. doi: https://doi.org/10.1101/272898

García Criado M (PhD), **IH Myers-Smith***, AD Bjorkman, CE Lehmann, N Stevens. 2020. Woody plant encroachment intensifies under climate change across tundra and savanna biomes. Global Ecology and Biogeography 29:925-943. doi: https://doi.org/10.1111/geb.13072

Cunliffe AM (Postdoc), **IH Myers-Smith***, *et al.* 2020. Aboveground biomass corresponds strongly with drone-derived canopy height but weakly with greenness (NDVI) in a shrub tundra landscape. Environmental Research Letters 15:125004. doi: https://doi.org/10.1088/1748-9326/aba470

Berner L, *et al.* **IH Myers-Smith**... 2020. Summer warming drives widespread but not uniform greening in the Arctic tundra biome. Nature Communications 11:4621. doi: https://doi.org/10.1038/s41467-020-18479-5

Kropp H, *et al.* **IH Myers-Smith**... 2020. Shallow soils are warmer under trees and tall shrubs across Arctic and Boreal ecosystems. Environmental Research Letters doi: https://doi.org/10.1088/1748-9326/abc994

Buchwal A, *et al.* **IH Myers-Smith**... 2020. Divergence of Arctic shrub growth associated with sea ice decline. *PNAS* 117 (52) 33334-33344. doi: https://doi.org/10.1073/pnas.2013311117

Bowler D, *et al.* **IH Myers-Smith**... 2020. Mapping human pressures on biodiversity across the planet uncovers anthropogenic threat complexes. People and Nature 2(2):380-394. doi: https://doi.org/10.1002/pan3.10071

Thomas HD (PhD), Bjorkman AD (Postdoc), **IH Myers-Smith***, SC Elmendorf, J Kattge, *et al.* 2020. Global plant trait relationships extend to the climatic extremes of the tundra biome. Nature Communications 11:1351. doi: https://doi.org/10.1038/s41467-020-15014-4

Kattge J, *et al.* **IH Myers-Smith**... 2020. TRY plant trait database-enhanced coverage and open access. Global Change Biology 26(1):119-188. doi: https://doi.org/10.1111/gcb.14904

Lembrechts JJ *et al.* **IH Myers-Smith**... 2020. SoilTemp: a global database of near-surface temperature. Global Change Biology 26(11): 6616-6629. doi: https://doi.org/10.1111/gcb.15123

2019 **Myers-Smith IH***, *et al.* 2019. Eighteen years of ecological monitoring reveals multiple lines of evidence for tundra vegetation change. Ecological Monographs 89(2):e01351. doi: http://doi.org/10.1002/ecm.1351

Blowes SA, *et al.* **IH Myers-Smith**... 2019. Biodiversity trends are stronger in marine than terrestrial assemblages. Science 366(6463):339-345. doi: http://doi.org/10.1101/457424

Assmann JJ (PhD), **IH Myers-Smith***, AB Phillimore, AD Bjorkman, RE Ennos, JS Prevéy, GHR Henry, NM Schmidt, RD Hollister. 2019. Snow-melt and temperature - but not sea-ice - explain variation in spring phenology in coastal Arctic tundra. Global Change Biology 25(7):2258-2274. doi: http://doi.org/10.1111/gcb.14639

Bjorkman AD (Postdoc), MG Criado, **IH Myers-Smith**, *et al.*, 2019. Status and trends in Arctic vegetation: Evidence from experimental warming and long-term monitoring. Ambio 49:678-692. doi: http://doi.org/10.1007/s13280-019-01161-6

Cunliffe AM (Postdoc), *et al.* **IH Myers-Smith***. 2019. Rapid retreat of permafrost coastline observed with aerial drone photogrammetry. The Cryosphere 13:1513-1528. doi: http://doi.org/10.5194/tc-2018-234

Hargreaves A, *et al.* **IH Myers-Smith**... 2019. Seed predation increases from the Arctic to the Equator and from high to low elevations. Science Advances 5(2):eaau4403. doi: http://10.1126/sciadv.aau4403

Prevéy J, *et al.* **IH Myers-Smith**... 2019. Warming shortens flowering seasons of tundra plant communities. Nature Ecology and Evolution 3:45-52. doi: http://doi.org/10.1038/s41559-018-0745-6

Venn S, **IH Myers-Smith**, J Camac and A Nicotra. 2019. Climate change: Alpine shrubs as ecosystem engineers. Austral Ecology 44(5):927-930. doi: https://doi.org/10.1111/aec.12727

Chase J, *et al.* **IH Myers-Smith**... 2019. Species richness change across spatial scales. 2019. Oikos 128(8):1079-1091. doi: http://doi.org/10.1111/oik.05968

2018 Bjorkman AD (Postdoc), **IH Myers-Smith***, SC Elmendorf, S Normand, N Rüger, *et al.* 2018. Changes in plant functional traits across a warming tundra biome. Nature 562:57-62. doi: http://dx.doi.org/10.1038/s41586-018-0563-7

Myers-Smith IH*, HD Thomas (PhD) and AD Bjorkman (Postdoc). 2018. Plant traits inform predictions of tundra responses to global change. New Phytologist. 221(4):1742-1748. doi: https://doi.org/10.1111/nph.15592

Bjorkman AD (Postdoc), **IH Myers-Smith***, SC Elmendorf, S Normand, Thomas HJD, *et al.* 2018. Tundra Trait Team: A database of plant traits spanning the tundra biome. Global Ecology and Biogeography 27(12):1402-1411. doi: http://dx.doi.org/10.1111/geb.12821

Thomas HJD (PhD), **IH Myers-Smith***, Bjorkman AD (Postdoc), SC Elmendorf, D Blok, *et al.* 2018. Traditional plant functional groups explain variation in economic but not size-related traits across the tundra biome. Global Ecology and Biogeography 28(2):78-95. doi: https://doi.org/10.1111/geb.12783

Bruelheide H, *et al.* **IH Myers-Smith**... 2018. Global trait-environment relationships of plant communities. Nature Ecology and Evolution 2:1906-1917. doi: http://dx.doi.org/10.1038/s41559-018-0699-8

Assmann JJ (PhD), JT Kerby, AC Cunliffe, **IH Myers-Smith***. 2018. Vegetation monitoring using multispectral sensors - best practices and lessons learned from high latitudes. Journal of Unmanned Aerial Vehicle Systems 7(1):54-75. doi: https://doi.org/10.1139/juvs-2018-0018

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Angers-Blondin S (PhD), **IH Myers-Smith***, S Boudreau. 2018. Plant-plant interactions could limit recruitment and range expansion of tall shrubs into alpine and arctic tundra. Polar Biology 41:2211. doi: https://doi.org/10.1007/s00300-018-2355-9

Loranty, MM, *et al.* **IH Myers-Smith**... 2018. Changing ecosystem influences on soil thermal regimes in northern high-latitude permafrost regions. Biogeosciences 15:5287-5313. doi: https://doi.org/10.5194/bg-15-5287-2018.

Myers-Smith IH and J Myers. 2018. Technical comment on Precipitation drives global variation in natural selection. Science 359(6374):eaan5028. doi: https://doi.org/10.1126/science.aan5028

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2017 **Myers-Smith IH** and DS Hik. 2017. Climate warming as a driver of shrubline advance in high-latitude alpine tundra. Journal of Ecology 106(2):547-560. doi: https://doi.org/10.1111/1365-2745.12817

Duffy J, *et al.* **IH Myers-Smith**. 2017. Location, location, location: Considerations when using lightweight drones in challenging environments. Remote Sensing for Biodiversity & Conservation 4(1):7-19. doi: https://doi.org/10.1002/rse2.58

Martin A, E Jeffers, G Petrokofsky, **IH Myers-Smith** and M Macias-Fauria. 2017. Shrub growth and expansion in the Arctic tundra: an assessment of controlling factors using an evidence-based approach. Environmental Research Letters 12(8):085007. doi: https://doi.org/10.1088/1748-9326/aa7989

Barrio I, *et al.* **IH Myers-Smith**. 2017. Background invertebrate herbivory on dwarf birch (*Betula glandulosa-nana* complex) increases with temperature and precipitation across the tundra biome. Polar Biology 40:2265-2278. doi: https://doi.org/10.1007/s00300-017-2139-7

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2016 Wolter J, *et al.* **IH Myers-Smith**. 2016. Vegetation composition and shrub extent on the Yukon coast, Canada, are strongly linked to ice-wedge polygon degradation. Polar Research 35:24126. doi: https://doi.org/10.3402/polar.v35.27489

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2015 **Myers-Smith IH**, *et al.* 2015. Climate sensitivity of shrub expansion across the tundra biome. Nature Climate Change 5.9:887-891. doi: https://doi.org/10.1038/nclimate2697

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2014 Vellend M, *et al.* **IH Myers-Smith**. 2014. Assessing the relative importance of neutral stochasticity in ecological communities. Oikos. 123.12:1420-1430. doi: https://doi.org/10.1111/oik.01493

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2013 Vellend M, L Baeten, **IH Myers-Smith**, *et al.* 2013. Global meta-analysis reveals no net change in local-scale plant biodiversity over time. Proceedings of the National Academy of Sciences 110.48: 19456-19459. doi: https://doi.org/10.1073/pnas.1312779110 (Commentary in PNAS: http://www.pnas.org/content/early/2013/11/13/1319304110)

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2012 **Myers-Smith IH**, DS Hik. 2012. Why do northern alpine willows have female-biased sex ratios? American Journal of Botany 99:1243-1248. doi: https://doi.org/10.3732/ajb.1200107

Myers-Smith IH, S Trefry and V Swarbrick. 2012. Resilience: Easy to use but hard to define. Ideas in Ecology and Evolution 5:44-53.

Elmendorf SC, *et al.* **IH Myers-Smith**. 2012. Plot-scale evidence of tundra vegetation change and links to recent summer warming. Nature Climate Change 2:453-457. doi: https://doi.org/10.1038/nclimate1465

Elmendorf SC, *et al.* **IH Myers-Smith**. 2012. Global assessment of experimental climate warming on tundra vegetation: heterogeneity over space and time. Ecology Letters 15:164-175. doi: https://doi.org/10.1111/j.1461-0248.2011.01716.x

McLennan DS, *et al.* **IH Myers-Smith**. 2012. Recent climate-related terrestrial biodiversity research in Canada's Arctic national parks: review, summary, and management implications. Biodiversity 13:157-173. doi: https://doi.org/10.1080/14888386.2012.720818

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In review:

Daskalova GD (PhD), *et al.* **IH Myers-Smith***… **Representation of global change drivers across biodiversity datasets** EcoEvoRxiv. 28 Jul. 2021. Submitted to *Nature Ecology and Evolution* (NATECOLEVOL-210613960A)

García Criado M (PhD), **IH Myers-Smith*** *et al.* Plant traits poorly predict winner and loser shrub species in a warming tundra biome. In review at *Journal of Ecology* (JEcol-2021-0511)

Thomas HD (PhD), **IH Myers-Smith***, *et al.* Litter quality and climate drive tundra litter decomposition. In revision at *Nature Communications* (NCOMMS-20-09746-T)

Walker ER (Undergrad), Thomas HD, **IH Myers-Smith***. Experimental evidence of soil moisture rather than temperature as the key driver of litter decomposition along a high-latitude elevational gradient. In revision at *Functional Ecology* (FE-2018-00143)

Lindén, E et al. **IH Myers-Smith**… Circum-Arctic distribution of chemical anti-herbivore compounds suggests biome-wide trade-off in defence strategies in arctic shrubs. In review at Ecography (ECOG-06166)

Sarneel J et al. **IH Myers-Smith**… Reading tea leaves: Uncoupled drivers of initial decomposition rates and stabilization. In review at *Nature GeoScience* (NGS-2021-04-00659)

Vuorinen K et al. **IH Myers-Smith**… Growth rings show constrained evidence for ungulates' potential to suppress shrubs across the Arctic. In review at *Nature Ecology and Evolution* (NATECOLEVOL-210513578)

Rixen C, et al. **IH Myers-Smith**… Changing winters: Snow effects on Arctic and alpine tundra ecosystems. Submitted to *Arctic Science* (AS-2020-0058)

Curasi S, *et al.* **IH Myers-Smith**... Range shifts in a foundational sedge induce large Arctic ecosystem carbon losses and gains. Submitted to *Earth's Future* (ELE-01011-2020)

In prep:

Grabowski MM (MSc), **IH Myers-Smith***, *et al.* Contrasting boreal and tundra shrub growth responses to climate and competition.

Boyle JS (Undergrad), *et al.* **IH Myers-Smith***. Summer and autumn temperatures - but not growing season length - influence growth of a dwarf willow in coastal Arctic tundra.

Institutional Responsibilities

Current: Head of Post-graduate Research (Training & Progress) in the School of GeoSciences (I provide training for >200 PhD and Masters by Research students and contribute to the Postgraduate Policy Committee)

Previous: Member of the Global Change Seminar Organisation Committee, School of GeoScience Facilities Committee, School of GeoScience Equality & Diversity Committee, School of GeoScience Digital Communications and Web Working Group, Edinburgh Ecology Network organising committee

Journal Editorial Boards

Executive Editorial Board Environmental Research: Ecology

Research Funding Panels

Swiss Polar Foundation

Selected Awards and Scholarships

2018	Walters Kundert Fellowship, Royal Geographical Society, 10 000 GBP
2016	Canadian Society for Ecology and Evolution Early Career Award
2012	Garfield Weston Postdoctoral Fellowship in Northern Research, 50 000 CAD p.a.
2011 - 2012	EnviroNorth Postdoctoral Fellowship, NSERC CREATE Grant, 40 000 CAD p.a.
2010	Steve and Elaine Antoniuk Graduate Scholarship in Arctic Research, 4500 CAD
2009 - 2011	Garfield Weston Ph.D. Award for Northern Research, 40 000 CAD p.a.
2008 - 2011	The President's Doctoral Prize of Distinction, 4500 CAD p.a.
2007 - 2009	Canon National Parks Scholars Program, 80 000 USD
2007 - 2011	Honorary Izaak Walton Killam Memorial Scholarship
2007 - 2011	Alberta Ingenuity PhD Student Scholarship, 7000 CAD p.a.
2007	Jennifer Robinson Scholarship, Arctic Institute of North America, 5000 CAD
2006 - 2009	NSERC Canadian Graduate Scholarship, University of Alberta, 35 000 CAD p.a.

2006	Graduate Entrance Scholarship, University of Alberta, 2000 CAD

Teaching Experience

I teach three courses per year and have supervised 16 honours dissertations while at the University of Edinburgh. I run the Postgraduate Training Programme and contribute to the Postgraduate Research Policy Committee. I have received positive feedback on my teaching and lectures from students, commenting on my engaging style, enthusiasm, approachability, and the positive learning environment that I encourage. I have been nominated for university-level teaching awards in 2016-2020 and was the winner of the Innovative Assessment Award for the Conservation Science course that I lead in 2016 and was runner up with the GeoScience Outreach Course of the Innovative Assessment Award in 2017.

I run the Coding Club Initiative to overcome "code fear" and "statistics anxiety" that can prevent people from engaging with quantitative skills (2014 – ongoing). In 2021, this initiative is reaching over 1 million users around the world (Google Analytics) including hundreds of undergraduate and postgraduate students at the University of Edinburgh. Coding Club won the EUSA 2017 Impact Award for best student-staff collaboration. I have received over £50K for the development of Coding Club through schemes such as the Principal's Teaching Award Scheme, DataLab Scotland and Innovation Initiative Grants.

- 2018 DataLab online learning funding (30 000 GBP) awarded for "Coding Club: Data Science for ecologists and environmental scientists" (https://ourcodingclub.github.io/)
- 2017 EUSA Impact Award winner for best student - staff collaboration (see https://teamshrub.wordpress.com/2017/04/10/coding-club-goes-to-aberdeen-and-the-impact-awards/)
- 2017 EUSA Teaching Awards finalist for Innovative Assessment, nominations for Best Course
- 2016 EUSA Teaching Awards winner for Innovative Assessment, nominations for Best Course, Best Overall Teacher (see http://www.teaching-matters-blog.ed.ac.uk/?p=571)

2019 - 2020	PhD and MSc graduate training course (course organizer, sole instructor)
2018 - 2020	Data Science in Ecology and Environmental Science (course organizer, sole instructor)
2014 - 2020	Conservation Science (course organizer, one of two instructors - lectures, field trip, marking)
2013 - 2018	GeoScience Outreach (course organizer - workshops, project supervision, marking)
2014 - 2020	Principles of Ecology (1 week and part of the exam)
2015 - 2020	Critical Thinking in Ecology and Environmental Sciences (full-semester tutorial group)
2015 - 2017	Current Issues in Ecology and Environmental Sciences (1 week)
2013 - 2015	Land-Atmosphere Interactions (3 weeks)
2015 - 2017	Climate Change Ecology and Evolution (1 lecture)
2013	Conservation Management (1 week)
2008	Co-taught Yukon College Field Course, Hershel Island, YT
2007 - 2011	Supervision of NSERC undergraduate research students
2003 - 2007	Teaching assistance (Conservation Biology, Ecological Modeling, Agroecology)

Graduate Student Supervision

I have supervised 12 PhD students, co-supervised one integrated MSc in the School of Informatics at the University of Edinburgh and co-supervised two MSc students in Canada (there is no Masters by Research programme in my academic department). Three of my PhD students have graduated and nine are current students. My graduated PhD students have gone on to positions working as a UK government policy specialist, a data scientist and an academic researcher in a postdoctoral position. I have supervised 16 undergraduate dissertation students.

2021 - 2025	D Jerome (PhD, UEdinburgh/UHelsinki) Climate sensitivity of shrub growth across the tundra-forest ecotone
	M Anderson (co-supervised PhD, USherbrooke) Plant phenology influences on tundra plant spectral diversity and traits

2020 - 2024	C Hoad (PhD, UEdinburgh) Abiotic drivers of Arctic greening
	J Everest (PhD, UEdinburgh) Functional diversity in a warming Arctic
	M Grenier (PhD, UEdinburgh) Autumn plant phenology responses to a warming Arctic
	G de Jong (co-supervised PhD, UGothenburgh) Winter and microclimate influences on tundra plant phenology
2019 - 2023	E Gallois (PhD, UEdinburgh) Microclimate influences on tundra plant growth and phenology
2017 - 2021	G Daskalova (PhD, UEdinburgh) Attribution of biodiversity change to global change drivers around the world
	M García Criado (PhD, UEdinburgh) Quantifying distribution shifts of woody plant species under climate change
2017 - 2019	K Stanski (co-supervised MSc, Edinburgh - School of Informatics) Flower detection using object analysis: new ways to quantify plant phenology in a warming tundra biome
2015 - 2018	S Angers-Blondin (PhD, UEdinburgh) Climatic and biotic controls of shrub growth and expansion in the Arctic
	H Thomas (PhD, UEdinburgh) Climate change as a driver of Arctic tundra shrub expansion
	J Assmann (PhD, UEdinburgh) Phenology shifts and greening of Arctic tundra vegetation with climate change
2013 - 2015	M Grabowski (MSc Committee, UBC) Boreal Shrub Growth Responses to Fertilization, Herbivory, and Climate
	B Marquis (MSc Committee, USherbrooke) Sugar maple sensitivity to climate along altitudinal gradients

Postdoc Supervision

I have supervised two postdocs and will be recruiting a third postdoc in spring 2022.

2015 – 2017	A Bjorkman, Current position: Senior Lecturer/Associate Prof., University of Gothenburg
2016 – 2018	A Cunliffe, Current position: Oppenheimer Senior Research Fellow, University of Exeter

Science Communication - Selected academic presentations and invited talks

I am a confident public speaker and have given plenary conference and public talks for audiences of >500, some of which have been filmed and viewed thousands of times. I enjoy combining photography, video and other visuals to communicate science in an engaging manner to diverse audiences.

2021 Invited Seminars:

Durham University, Durham, UK: “Climate warming and the greening of the Arctic”

Université de Moncton, New Brunswick, CA: “Capturing Arctic greening across scales informs mechanisms of change”

University of Helsinki, Helsinki, Finland: “Capturing Arctic greening across scales informs mechanisms of change”

NASA ABoVE Project, Alaska, US: “Cross-scale research captures Arctic greening in the Yukon Arctic”

Royal Society of Edinburgh, Edinburgh, UK: “Biodiversity and Climate Interactions”

St. Andrews (November, 2021): “What do tundra plant responses to warming at the top of the world teach us about biodiversity change for the rest of the planet?”

Upcoming: ArcticNet 2021 (Dec. 2021), International Biogeography Society Conference (symposium plenary, Jan. 2022)

2020 Invited Seminar:

Oxford Polar Forum, Oxford, UK: “The Greening of the Arctic: What do the data tell us?”

Speaker for the Royal Society (London) working group on biodiversity and climate change science, London, UK: “Biodiversity change at the climate extremes of the planet”

Plenary Speaker:

Changing Arctic conference, Tromsø, Norway - cancelled due to Covid-19

International Biogeography Society, Vancouver, BC, Canada – postponed to 2022 due to Covid-19

European Space Agency Polar Workshop, Copenhagen, Denmark: "The Greening of the Arctic"

Conference talk:

Arctic Science Summit Week, Lisbon, Portugal: "The Greening of the Arctic"

2019 Plenary Speaker:

NASA ABoVE Meeting, La Jolla, CA, US: "Vegetation Dynamics and the Greening of the Arctic"

Invited Seminars:

SFU, Vancouver, BC, CA: "Disentangling the drivers of Arctic greening across scales"

UCBoulder, Boulder, CO, US: "Challenges to quantifying ecological responses to global change across scales"

2018 Plenary Speaker:

US National Academies - Arctic greening workshop, Washington, DC, US: "Understanding Northern Latitude Vegetation Greening and Browning: Field-scale measurements and uncertainties"

ArcticNet Meeting, Ottawa, ON, CA: "The Greening of the Arctic"

Swiss Polar Day, Zürich, Switzerland: "Quantifying the Drivers and Impacts of Tundra Vegetation Change"

International Tundra Experiment Meeting, Stirling, Scotland: "ITEX syntheses: Attribution of ecological change to warming across the tundra biome"

Canadian Airborne Biodiversity Observatory Meeting, Montreal, QC, CA: "Tundra biodiversity and the greening of the Arctic"

NGEE Arctic Meeting, Washington, DC, US: "An introduction to the Tundra Trait Team Database"

2017 Invited Seminar:

Dartmouth College, NH, US: "Attribution of ecological change to climate across the tundra biome"

Plenary Speaker:

New Phytologist 39th Trait covariance symposium, Exeter, UK: "Biome-scale patterns in tundra plant traits and warming-induced change"

Conference talk:

ArcticNet Meeting, QC, CA: "Attribution of ecological change to warming across the tundra biome – a summary of recent data syntheses"

2016 Invited Seminar: University of Sheffield, Sheffield; Plenary Speaker: Canadian Society of Ecology and Evolution Early Career Awardee Talk, CSEE Meeting, St. John's Newfoundland; Invited Seminar: University of British Columbia, Vancouver, BC; Invited Seminar: Abisko Research Station, Abisko, Sweden

2015 Plenary Speaker: Oikos Conference, Umeå, Sweden; Invited Seminar: Oxford University, Oxford, UK; Invited Seminar: St. Andrews University, St. Andrews, UK; ArcticNet, Vancouver, BC

2014 Invited Seminar: iDiv, Leipzig, Germany; Canadian Society for Ecology and Evolution Conference, Montreal, QC; Invited Seminar: University of Stirling, UK

2013 Plenary Speaker: Faster, Higher, More Conference, Bergün, CH; Invited Seminar: University of Zurich, Zurich, CH; International Tundra Experiment Meeting, Bergün, CH

2012 ArcticNet, Vancouver, BC; Ecological Society of America Meeting, Portland, OR; International Polar Year Meeting, Montreal, QC; Invited Seminar: Harvard Forest, MA

Canadian Society for Ecology and Evolution, Banff, AB (2011), American Geophysical Union Meeting, San Francisco, CA (2010), International Polar Year Conference, Edmonton, AB (2010), Climate Change and the Worlds Mountains, Perth, Scotland (2010), WorldDendro Meeting, Rovaniemi, Finland (2010), International Polar Year Conference, Oslo, Norway (2010) ArcticNet ASM, Victoria, BC (2009), Institute for Mountain

Research, Davos, Switzerland (2009), Greifswald University, Greifswald, Germany (2009), Arctic Science Summit Week, Bergen, Norway (2009)

Scientific Outreach - Selected activities (https://teamshrub.com/outreach/)

I have coordinated and participated in scientific outreach with the general public, school children and local communities (teamshrub.com/outreach/). I have contributed to impact assessments to communicate scientific findings to policy makers including the IPCC Impacts reports. I have been exploring how science communication can engage broader audiences through photography, videography and 3D technology.

2021	National Geographic Twitter Feed - Women's History Month - Mar. 2021
	The Greening Arctic, invited talk, National Geographic Society headquarters, Feb. 2021
2020	WIRED Magazine 25 innovators - online Sept. 2020
	The Greening of the Arctic, Glasgow Natural History Society, Oct. 2020
2019	National Geographic Explorer - field expedition to Canadian Arctic July - Aug. 2019
2018	New Scientist Live, Public talk at the New Scientist Science Festival, London, Sept. 2018
	Arctic from Above Digital Exhibition
2017	Edinburgh International Science Festival:
	Contemporary Connections: Exploring the Art in Data - 1 Apr. - 12 May 2017
	Tundra shrubs - Arctic time machines, with Sandra Angers-Blondin - 12 Apr. 2017
	Researching with Drones: Meet the Experts -15 Apr. 2017
2016	Our Dynamic Earth - Inspiring Young Scientists (16-17 Oct.)
2013 - 2018	University of Edinburgh GeoScience Outreach Course Coordinator
2012	Sherbrooke CEGEP - University Exchange Programme

Contribution to the IPY Polar Resource Book (2010), Scientists & Innovators in the Schools, Vancouver, BC (2010), ArcticNet Student Association, Outreach Coordinator (2009 - 2010), Innovators in the Schools Program, Yukon Territory (2009), International Polar Year Canadian Youth Steering Committee, Outreach Coordinator (2007 - 2009), Let's Talk Science Program, University of Alberta (2006 - 2008)

Media Communications (https://teamshrub.com/media/)

I am dedicated to communicating my science to broad audiences. Since arriving at the University of Edinburgh, my research has been covered in a variety of media sources including for example the BBC, WIRED, New Scientist, CBC, etc. See links below.

2021	National Geographic: 26 changemakers fighting for the planet
	WIRED: The UN Climate Report: All Is Not Well—but All Is Not Lost
	WIRED: More Lightning in the Arctic Is Bad News for the Planet
2020	WIRED: Beautiful Yet Unnerving Photos of the Arctic Getting Greener
	WIRED25: Meet This Year's WIRED25, Climate Change and Saving Our Earth
	WIRED: Why the Arctic Is Warming So Fast, and Why That's So Alarming
	Coverage of Assmann et al. ERL 2020 in WIRED: Beautiful Yet Unnerving Photos of the Arctic Getting Greener, STV: https://news.stv.tv/video/edinburgh-scientists-use-drones-to-study-arctic-tundra
	Coverage of Cunliffe et al. ERL 2020 in EOS Magazine of the American Geophysical Union: Drones Help Bridge the Gaps in Assessing Global Change
	Podcast: Arctic Canada: The Culture Cure - https://podcasts.apple.com/ca/podcast/arctic-canada-the-culture-cure/id1446659881
	Podcast: Outside/In - http://outsideinradio.org/shows/10x10bog

Coverage of Daskalova et al. NComms 2020: Common species mirror rare animals' response to global change

Coverage of Daskalova et al. Science 2020: Forest loss escalates biodiversity change, How forest loss has changed biodiversity across the globe over the last 150 years

Coverage of Thomas *et al.* NComms 2020: Plant life on the edge

Coverage of García Criado *et al.* GEB 2020: Climate shifts prompt shrubs and trees to take root in open areas: Daily Mail, The Herald, The Scotsman, etc.

Coverage of Myers-Smith et al. NCC 2020: Global Science Team on Red Alert as Arctic Lands Grow Greener: WIRED, Daily Mail, etc.

2019 Coverage of Blowes et al. Science 2019: Washington Post

New Scientist: How teabags became a secret weapon in the fight against climate change

Coverage of Cunliffe et al. The Cryosphere 2019: Gizmodo

Coverage of Assmann et al. GCB 2019: Early melting of winter snowfall advances the Arctic springtime: BBC Radio Scotland (minute 16), physics.org, ScienceDaily

Science News: Climate change made the Arctic greener. Now parts of it are turning brown.

Coverage of Myers-Smith et al. Ecol. Mono. 2019: Eighteen years of ecological monitoring reveals multiple lines of evidence for tundra vegetation change

2018 Royal Geographical Society Walters Kundert Fellowship Press Release: Is the Arctic getting greener?

Coverage of Bjorkman et al. Nature 2019: Taller plants moving into Arctic because of climate change: BBC, Science Daily, phys.org, Newsweek, etc.

New Scientist Live!, Public talk at the New Scientist Science Festival

Fieldwork in the Arctic is surprisingly costly, limiting the research done there, Science News

Arctic Secrets, Documentary series featuring Team Shrub on Qikiqtaruk, White Pine Pictures

2017 The Great Global Species Shakeup, Toronto Star

Capturing change in the Arctic, Vizzuality Blog

Brewing Big Data: The Tea-Bag Index, BioScience

Rapid rate of coastal erosion on Herschel Island, CBC News

Interview clip on the daily morning programme "A New Day", CBC Radio North

2016 Interview for CBC Quirks and Quarks

2015 Coverage of Nature Climate Change paper: Climate sensitivity of shrub growth across the tundra biome, Jul. 2015 - BBC world service, Scotsman, Daily Mail, etc. - "Global Warming and the Arctic Tundra"

Up Here Magazine "Invasion of the Shrubs"

Plants Duke It Out in a Warming Arctic - BioScience

2013 Tundra in Turmoil and Repeat Photography Reveals a Changing Climate - Science

Vegetation May Speed Warming of Arctic - Scientific American

2012 Telling changes on the tundra - University of Alberta News

Edmonton Journal "Edmonton biologist on international team monitoring disappearance of Arctic tundra in Canada's Yukon"

Shrub Hub assesses growth in tundra ecosystems - Environmental Research Web

Code, Data and Open Science (https://teamshrub.com/data-and-code/)

My research group follows Open Science best practice including study pre-registration and making protocols, datasets, code and preprints publicly available., I have developed field collection protocols and compiled tundra biome-wide datasets including 1000s to 100,000s of records of plant growth rings, trait records, community composition and phenology measurements (e.g., https://github.com/TundraTraitTeam) and terabytes of drone

data (e.g., https://arcticdrones.org/). I also teach coding and quantitative skills to undergraduate, Masters and PhD students funded by the DataLab and UEdinburgh (e.g., https://ourcodingclub.github.io/).

Data Science Skillsets (https://github.com/IslaMS)

I am a quantitative ecologist and an advanced R user (tidyverse, data visualisation, working with large datasets) with experience in Stan (hierarchical Bayesian modelling), the Google Earth Engine (remote sensing analyses of Satellite and drone imagery) and coding in JavaScript and Python in addition to R. I use GitHub for version control (github.com/IslaMS). I teach Data Science in Ecology and Environmental Science at the University of Edinburgh (datascienceees.github.io/) and was the lead academic developing the Coding Club Data Science for Ecologists and Environmental Scientists online course launched in February of 2020 (ourcodingclub.github.io/course). I am passionate about teaching data science skills to enhance diversity and representation in quantitative disciplines.

- Advanced R user (tidyverse, data visualisation, working with large datasets)
- Stan (hierarchical Bayesian modelling)
- Google Earth Engine (remote sensing analyses of satellite and drone imagery)
- Coding: R, JavaScript, Python
- Version control: GitHub (collaborative research and teaching using GitHub Classroom)

Working Group Leadership and Participation

2021 sTraits working group, German Synthesis Centre for Biodiversity Science (sDiv), Leipzig, Germany https://www.idiv.de/en/straits.html

2019 sREplot working group, German Synthesis Centre for Biodiversity Science (sDiv), Leipzig, Germany https://www.idiv.de/sdiv/working_groups/wg_pool/sreplot.html

2017 Tundra Browning workshop, University of Sheffield; Arctic Functional Diversity (ArcFunc) working group, Aarhus University, Denmark; Decomposition Workshop, Lund University, Sweden; sChange working group writing retreat, St. Andrews, UK

2016 sChange working group, German Synthesis Centre for Biodiversity Science (sDiv), Leipzig, Germany https://www.idiv.de/sdiv/working_groups/wg_pool/schange.html

2015 sTUNDRA II working group (lead PI), iDiv Centre for Biodiversity Research, Leipzig, Germany (organiser); SynergyDrOne Workshop: Methods in drone ecology, Denmark; US Department of Energy: Incorporating plant traits into ecosystem models, Maryland, US; ShrubHub Meeting, Vancouver, BC

2014 sTUNDRA working group (lead PI) https://www.idiv.de/sdiv/working_groups/wg_pool/stundra.html, iDiv Centre for Biodiversity Research, Leipzig, Germany (organiser); sChange working group, German Synthesis Centre for Biodiversity Science (sDiv), Leipzig, Germany

2013 Arctic Freshwater Synthesis, Arctic Remote Sensing Workshop

2011 Shrub Hub Research Network Data Synthesis Workshop (lead PI), Davos, Switzerland, International Tundra Experiment data synthesis

Meetings/Symposia Co-convened

2020 British Ecological Society 2020 Festival of Ecology Thematic Session “Capturing ecology across scales using new technology”, Online

2017 New Phytologist 39th Trait covariance symposium (organising committee), Exeter, UK

2016 High Latitude Drone Ecology Network (HiLDEN) meeting (co-organiser), AGU San Francisco, US

2015 ShrubHub Meeting, ArcticNet, Vancouver, BC

2014 Biodiversity change during the Anthropocene, Canadian Society for Ecology and Evolution Meeting, Montreal, Canada (1 of 2 co-organisers)

2013 European GeoScience Union Meeting, Vienna, Austria: Snow-shrub interactions: Exploring the hydrology, biochemistry and ecology of changing tundra ecosystems (1 of 2 co-organisers)

2012 Shrub Hub Meeting International Polar Year Meeting, Montreal, QC (primary organiser)

2011 Canadian Society for Ecology and Evolution Meeting, Banff, AB, Mountain Ecology: Climate change and challenges in high-altitude ecosystems (1 of 2 co-organisers)

2010 American Geophysical Union Fall Meeting, San Francisco, CA, Greening of the Arctic Session (1 of 3 co-organisers); Shrub Hub Meeting, American Geophysical Union Fall Meeting (primary organiser); International Polar Year Oslo Meeting, Oslo, Norway, T3-6 Impact of climate change on polar terrestrial ecosystems (1 of 2 co-organisers); Shrub Hub Meeting, World Dendro Conference, Rovaniemi, Finland (primary organiser)

PhD Examiner

Aarhus University, Denmark, August 2020; L'Université Clermont Auvergne, France, Jun. 2020; University of Barcelona, Spain, Apr. 2017; Université Grenoble Alpes, France, Nov. 2016; Umeå University, Sweden, Sep. 2016; Université Laval, Québec, Jun. 2015; University of Basel, Switzerland, Oct. 2014

Journal/Proposal Reviews Conducted

Science, Nature Climate Change, Geophysical Research Letters, Nature Ecology and Evolution, Nature Plants, Nature Communications, Journal of Ecology, Global Change Biology, New Phytologist, Phil Trans R Soc B, Journal of Biogeography, Environmental Research Letters including Special Issue on Tundra Vegetation Change (Guest Editor), Journal of Geophysical Research Biogeosciences, Biogeosciences, Journal of Vegetation Science, Arctic, Antarctic and Alpine Research, American Journal of Botany, Canadian Journal of Forest Research, Polar Research, Alpine Botany, Écoscience, Elementa: Science of the Anthropocene, Folia Geobotanica, National Geographic Foundation, National Science Foundation (US), NASA, USDA, DOE & NOAA carbon cycle science solicitation, BiodivERsA (FP7 ERA-NET scheme), Netherlands Organization for Scientific Research, Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), NSERC (Canada), NERC (UK)

Professional Societies

British Ecological Society, Canadian Society for Ecology and Evolution, Ecological Society of America, American Geophysical Union, ArcticNet